

LETTER TO THE EDITOR

Extraordinary claims without extraordinary evidence: controversy on anti-androgen therapy for COVID-19

Editor,

We read with much interest McCoy et al's report on 5-alpha-reductase inhibitors associated with reduced frequency of coronavirus disease 2019 (COVID-19) symptoms in males with androgenetic alopecia (AGA).¹ Incidentally, a day later, a previously healthy 40-year-old man treating his AGA with 1 mg oral finasteride daily since 2 years reported having suffered from confirmed infection with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) only two months earlier. Clinical symptoms of COVID-19 were severe, with fever ($>38^{\circ}\text{C}$), dry cough, shortness of breath, pneumonia, sore throat, anosmia, ageusia, nausea, anorexia, headache, fatigue, myalgia and lower back pain, despite having remained on his medication with finasteride during the whole course of the infection. The disease duration was 3 weeks.

Goren et al originally published their hypothesis of an association between SARS-CoV-2 infectiveness and the androgen pathway, which presumably results in an androgen-mediated higher SARS-CoV-2 vulnerability and mortality rate from COVID-19 in males,² and suggested that patients with AGA were at a particular risk of severe symptoms based on the underlying peculiarities of androgen metabolism. However, their respective studies³⁻⁵ have been scrutinized and not found to be convincing by other authors with regard to the accuracy and validity of the statistics.^{6,7} And yet, the same league of authors, just in slightly different combinations, has continued to provide within a short time a number of publications aiming at corroborating their hypothesis. Ultimately, they suggested that antiandrogen treatment, including the 5-alpha-reductase inhibitors, could have a therapeutic benefit, while experts challenged the protective effect of androgen deprivation therapy in a study of patients aged ≥ 70 years with metastatic prostate cancer.⁸

The novel viral pandemic COVID-19 has sparked uncertainties and controversies worldwide as to its origin, natural course and treatment. In this situation, the medical disciplines strive to contribute to a better understanding of the disease, some with a sound and sober approach, and the best available evidence gained from the scientific method of observation and statistics, and others with a propensity for publicity with the respective reverberation in the social media.⁹

Science Integrity Digest (www.scienceintegritydigest.com) has recently drawn attention to the practice of some groups of authors cranking up the number of papers on their resumes. In one of the journals indicted in this practice, allegedly, the Editor-in-Chief and associates, many from the editorial board with invited co-authorships of reputed dermatologists involved in hair, publish dozens of papers, frequently in form of letters to the editor, on COVID-19, with some peer reviews taking less than 24 h, and then cite themselves in other publications. Finally, despite the dermatologic nature of the respective journal, and the corresponding background of the authors, some of these papers have nothing to do with dermatology.

We are aware that despite all odds there are ongoing studies on both 5-alpha-reductase inhibitors (dutasteride) and antiandrogens (propranolol) in the treatment of COVID-19, regardless of some experts discouraging the compassionate use of drugs that suppress pituitary gonadotropin secretion or inhibition of androgen synthesis or the androgen receptor in an attempt to decrease SARS-CoV-2 infection risk or to alleviate the course of COVID-19.¹⁰ Notwithstanding our own observation, we are eager to see whether the results of randomized, controlled clinical trials will finally provide the extraordinary evidence for the extraordinary claims, beyond pretty graphics and catchpenny pretences.

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Conflicts of interest

All authors (RMT, AR, NC-U, MFRGD and HDR) have nothing to disclose.

Patient consent

The patient in this manuscript has given written informed consent to publication of his case details.

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